UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,184	10/30/2003	Asaf Adi	IL920030025US1	8188

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EXAMINER
CHUMPITAZ, BOB R

ART UNIT	PAPER NUMBER
3629	

NOTIFICATION DATE	DELIVERY MODE
06/10/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

iplawyor@us.ibm.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *2/18/2010*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-4,8-10 and 27-31* is/are pending in the application.
   4a) Of the above claim(s) *1, 5-7, 11-26* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *2-4,8-10 and 27-31* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

The following is a Non-Final Office action in response to communication

received February 18, 2010. Claims 2-4, 8-10 and 27-31 are pending and addressed

below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-4, 8, 27, 28 and 30 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Mori et al. (US 2003/0055695 A1, hereinafter Mori) in view of

Etzion et al. (US 6,604,093 B1, hereinafter Etzion) and in further view of Kevin

Crowston, "A taxonomy of organizational dependencies and coordination

mechanism" (hereinafter Crowston).

As per claims 27, 28 and 30, Mori discloses a method and system for processing

information, comprising:

"in a system comprising one or more processors, providing an active dependency

integration unit, comprising a first program module that receives as input first

events for processing together with a definition of dependencies between business

components in a business model in order to monitor a propagated impact between

the business components"; "receiving as input in the active dependency

integration unit events relating to business components in the business model, for

processing together with a definition of dependencies among the business

components in order to monitor a propagated impact of the events among the

business components, including receiving a first event relating to a first business

component" and "receiving as input in the active dependency integration unit

events relating to business components in the business model, for processing

together with a definition of dependencies among the business components in

order to monitor a propagated impact of the events among the business

components, including receiving a first event relating to a first business

component; responsively to the first event and to the dependencies, propagating a

second event indicative of a change to at least a second business component,

wherein the dependencies between the first business component and the second

business component comprise a compound dependency having two different

simple dependency types" (Abstract: inputting dependency related tasks; [0009-

10] project management method and apparatus comprising an inputting means for

inputting tasks (work items) of a project; memory means for storing a dependence

relation among tasks; memory means for storing information about an output of

each task; process model generation means for generating a process model having

the dependence information among the task and the information about the task

output and the resource; see also Claim 7 and associated text).

Mori does not expressly disclose "providing in the system a situation <u>awareness</u>

<u>unit</u>, comprising a second program module that detects situations comprising

specified combinations of second events and conditions"; "detecting in the

situation awareness unit situations comprising specified combinations of events

and conditions relating to a business model, the conditions comprising an order of

occurrence and temporal relationships among the events" and "detecting in the

situation awareness unit situations comprising specified combinations of events

and conditions relating to a business model, the conditions comprising an order of

occurrence and temporal relationships among the events." However, Etzion

teaches a situation awareness system that comprises tools and systems for

situation management (col. 3, lines 21-37) and applies filtering techniques to

detect situations (col. 2, lines 44-65; see also col. 8, lines 36-56). Furthermore,

Etzion teaches wherein the method for situation management includes specifying

a composite event as a combination of two or more predefined component events

and defining a rule, which causes a reaction to be invoked upon an occurrence of

the composite event subject to a given condition (Abstract; see also col. 9, lines

59-61 and Claim 1). Therefore, it would have been obvious to one of ordinary

skill in the art at the time of the invention to modify the process model, having

information representing dependence relations among tasks, of Mori to include

the process of providing situation awareness management tools as taught by

Etzion in order to detect and invoke a situation awareness reaction upon an

occurrence of the composite event subject to a given condition.

Mori further discloses "receiving in the active dependency integration unit a first

event relating to at least a first business component" ([0003] Design Structure

Matrix (DSM) is a project management method that expresses the tasks involved

in one project in a matrix form, mutual dependencies relations among the tasks

are put into the corresponding positions of the matrix so that the input/output

relations among the tasks can be clearly expressed; [0025] dependency relation

from the input task "merchandise concept generation" to the output task "car

construction decision"; see also Claim 1 and associated text).

With respect to: "responsively to the first event and to the dependencies,

propagating a change to at least a second business component"; "responsively to

the first event and to the dependencies, propagating a second event indicative of a

change to at least a second business component, wherein the dependencies

between the first business component and the second business component

comprise a compound dependency having two different simple dependency

types"; "responsively to the first event and to the dependencies, propagating a

second event indicative of a change to at least a second business component,

wherein the dependencies between the first business component and the second

business component comprise a compound dependency having two different

simple dependency types" and "passing a second event indicative of the change to

the situation awareness unit"; "passing the second event to the situation awareness

unit"; "passing the second event to the situation awareness unit" and

"responsively to the second event, detecting a situation in the situation awareness

unit"; "responsively to the second event, detecting a situation in the situation

awareness unit"; "responsively to the second event, detecting a situation in the

situation awareness unit" and "responsively to the situation, conveying a third

event from the situation awareness unit to the active dependency integration unit";

"responsively to the situation, conveying a third event from the situation

awareness unit to the active dependency integration unit"; "responsively to the

situation, conveying a third event from the situation awareness unit to the active

dependency integration unit" and "outputting a functional state of the business

model responsively to at least the third event"; "outputting a functional state of

the business model responsively to at least the thir,17d event"; "outputting a

functional state of the business model responsively to at least the third event"

Mori discloses generating a process model having dependence information among

multiple tasks [0010]. Furthermore, Mori discloses when the replacement of a

task occur the dependence relation of the task sequence changes respectively

[0026]. Additionally, Etzion teaches wherein the method for situation

management includes specifying a composite event as a combination of two or

more predefined component events and defining a rule, which causes a reaction to

be invoked upon an occurrence of the composite event subject to a given

condition (Abstract; see also col. 9, lines 59-61 and Claim 1). Lastly, Crowston

teaches managing task resource dependencies (Pg. 9) and managing dependencies

among multiple tasks and resources (Pg. 13-14, 17). It would have been obvious

to one of ordinary skill in the art at the time of the invention to modify the

Mori/Etzion combination to include the process for managing dependencies

among multiple tasks and resources as taught by Crowston in order to manage

interdependent components in a business model when changes in dependencies

occur therefore creating an updated functional dependency model.

As per claims 2-4, the Mori/Etzion/Crowston combination disclose claim 27 as rejected above, where Etzion further teaches "receiving as input event types, business component types, and dependency types associated with a business domain"; "receiving as input rules that describe how <u>a given</u> event affects a <u>specified</u> business component" and "receiving as input rules that describe when a change in a business component triggers an event" (Abstract: specifying a composite event as a combination of two or more predefined component events and defining a rule, which causes a reaction to be invoked upon an occurrence of the composite event subject to a given condition; see also col. 7, line 63 – col. 8, line 5: events input).

As per claim 8, the Mori/Etzion/Crowston combination disclose claim 27 as rejected above, where Etzion further teaches wherein the <u>definition</u> includes predefined dependency type semantics (Abstract: Abstract: specifying a composite event as a combination of two or more predefined component events and defining a rule, which causes a reaction to be invoked upon an occurrence of the composite event subject to a given condition; see also col. 2, lines 55-59 predefined relations; col. 3, lines 21-38 predefined component events).

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori/Etzion/Crowston in view of H. Herbst, G. Knolmayer, T. Myrach and M. Schlesinger: "The specification of business rules: A comparison of selected

methodologies" (Pub. 1994, hereinafter Herbst) and in further view of Nye (US 6,341,279 B1).

As per claims 9 and 10, the Mori/Etzion/Crowston combination disclose claim 8 as rejected above, and with respect to: "wherein said dependency type semantics include a mandatory logical operator that logically couples one or more source components of the dependency to one or more targets of the dependency and sets the targets to a worst state of the source components" and "wherein said dependency type semantics include an "N out of M" logical operator, wherein N is less than M, that logically couples M source components of the dependency to one or more targets of the dependency and sets the targets to ok if at least N of the source components are ok and otherwise sets the targets to "fail"" Mori discloses the process of representing dependence relationships from an input task to an output task [0025-27]. Additionally, Herbst teaches a conceptual modeling approach which supports triggering events, (synchronized) operations and resulting events, and where an operation consists of one or more tasks that are based on management rules and are executed sequentially, and where every operation may lead to different events according to issuing rules which may be e.g. be 'operation has been successful' or 'operation has failed': the abbreviation NR signifies that no response follows (Pg. 6, Section 3.1.2), In addition, Herbst teaches data modeling formalism, PN are augmented with token values to specify constraints concerning object state sequences generated by events and object type dynamics in databases (Pg.6, Section 3.1.4, see also Fig. 4 and associated text). Lastly, Nye teaches a method that allows a developer to add complex dependency logic to an existing database without having to modify the underlying structure of the database, where each event in the event model has an

associated event type and contains dependency logic that interrelates the events in the

event model with one another (Abstract & col. 5, lines 33-37). It would have been

obvious to one of ordinary skill in the art at the time of the invention to modify the

Mori/Etzion/Crowston combination to include logical dependent rule transactions as

taught by Herbst and complex dependency logic as taught by Nye in order to formulate

one or more issues arising in a business plan using logical reasoning techniques to

identify options relating to the business plan.

Claims 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Mori/Etzion/Crowston in view of C. Gill, T. Harrison, and C. O'Ryan "Using

the real-time event service" (hereinafter Gill).

As per claims 29 and 31, the Mori/Etzion/Crowston combination disclose claims 28 and

30 as rejected above, but do not expressly disclose "where wherein the simple

dependency types are a mandatory dependency and a disjunctive dependency." However

Gill teaches event dependency modeling, with conjunction and disjunction correlations

(Pgs. 1, 16). Therefore, it would have been obvious to one of ordinary skill in the art at

the time of the invention to modify the Mori/Etzion/Crowston combination to include

disjunctive sets of dependency events as taught by Gill in order to provide one or more

types of dependency modeling types whenever logical disjunction operations are required

so that to evaluate data dependency outputs.

Please Note:

Examiner has pointed out particular references contained in the prior arts of record in

the body of this action for the convenience of the applicant. Although the specified

citations are representative of the teachings in the art and are applied to the specific

limitations within the individual claim, other passages and figures may apply as well. It

is respectfully requested from the applicant, in preparing the response, to consider fully

the entire references as potentially teaching all or part of the claimed invention, as well

as the context of the passage as taught by the prior arts or disclosed by the examiner.

Applicant(s) are reminded that optional or conditional elements do not narrow the claims

because they can always be omitted. See *e.g.* MPEP §2106 II C: "Language that <u>suggest</u>

<u>or makes optional</u> but does not require steps to be performed or does not limit a claim to a

particular structure does not limit the scope of a claim or claim limitation. "As a matter of

linguistic precision, optional elements do not narrow the claim because they can always

be omitted." *In re Johnston*, 435 F.3d 1381, 77 USPQ2d 1788, 1790 (Fed. Cir.

2006)(where the Federal Circuit affirmed the Board's claim construction of "further

including that said wall may be smooth, corrugated, or profiled with increased

dimensional proportions as pipe size is increased" since "this additional content did not

narrow the scope of the claim because these limitations are stated in the permissive form

'may.' ").

Functional recitation(s) have been considered but given less patentable weight because

they fail to add any steps and are thereby regarded as intended use language. A recitation

of the intended use of the claimed invention must result in additional steps. See

Bristol-Myers Squibb Co. v. Ben Venue Laboratories, Inc., 246 F.3d 1368, 1375-76, 58

USPQ2d 1508, 1513 (Fed. Cir. 2001).

Response to Arguments

Applicant's arguments filed February 18, 2010 have been considered and are

persuasive with respect to the Keller et al. (US 6,847,970) prior art reference. See new

grounds of rejections above.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to BOB CHUMPITAZ whose telephone number is

(571)270-5494. The examiner can normally be reached on M-TR: 7:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, JOHN WEISS can be reached on (571) 272-6812. The fax phone number for

the organization where this application or proceeding is assigned is 571-270-6494.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

B. C.
Examiner, Art Unit 3629

/JOHN G. WEISS/
Supervisory Patent Examiner, Art Unit 3629